DOCUMENT RESUME

ED 360 831 FL 021 406

AUTHOR Ulanoff, Sharon; Pucci, Sandra
TITLE Is Concurrent-Translation or Preview-Review More Effective in Promoting Second Language Vocabulary Acquisition?
PUB DATE 14 Apr 93
NOTE 38p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Speeches/Conference Papers (150) -- Tests/Evaluation Instruments (160) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Advance Organizers; Bilingual Education; Classroom Techniques; Comparative Analysis; Elementary School Students; *English (Second Language); Grade 3; Instructional Effectiveness; *Learning Strategies; Limited English Speaking; Primary Education; Second Language Learning; *Second Languages; Spanish Speaking; *Translation; *Vocabulary Development

ABSTRACT

This study investigated the effectiveness of two English second language (ESL) teaching methodologies commonly used in bilingual classrooms: concurrent translation, often criticized but widely practiced, and dual language preview-review, which combines introductory and follow-up exercises in the first language and lesson teaching in the second language. Subjects were 60 native Spanish-speaking third-grade students of mixed Spanish and English reading skills, divided into three groups. One (n=16) was a control group, one (n=21) was taught using concurrent translation, and one (n=23) was taught using the preview-review method. All had the same teacher. Pre- and posttests of vocabulary acquisition were administered and analyzed. Results indicate that the children learned and retained far more vocabulary with the preview-review method. However, students taught with the concurrent translation method who took a delayed posttest performed better than those with a posttest immediately after treatment; this difference was not statistically significant. The findings support the use of preview-review in the bilingual classroom. Further research on the possible negative effects of the concurrent translation method, on long-term treatment effects, and on methods building on student background knowledge is recommended. A 57-item bibliography and the vocabulary test used are appended. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 360 831

Is Concurrent-Translation or Preview-Review More Effective in Promoting Second Language Vocabulary Acquisition?

Sharon Ulanoff

The Southwest Regional Laboratory

Sandra Pucci

University of Southern California

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Sharon Ulanoff

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Paper presented at the annual meeting of the American Educational Research Association, Atlanta, Georgia, April 14, 1993.

FL021406

BEST COPY AVAILABLE

Is Concurrent-Translation or Preview-Review More Effective in Promoting Second Language Vocabulary Acquisition?

Introduction

A limited English proficient (LEP) student has been defined as "a student whose native language is other than English and whose skills in listening to, speaking, reading, or writing English are such that he/she derives little benefit from regular school instruction" (Hopstock, et. al., 1984). In the past four years the number of LEP students in the United States increased by 36.2% (Roger and Olsen, 1991). These students, enrolled in various educational programs throughout the country, will require more than traditional English only instruction to allow them equal access to the curriculum. While there is much debate over the various types of bilingual education, research has shown that effective bilingual programs have the following characteristics: subject matter instruction in the native language, first language literacy development and comprehensible input in English (Krashen and Biber, 1988). It is a point of agreement amongst bilingual education experts that a child's primary language (L1) and English (L2) should be used equally overall (Legarreta-Marcaida, 1981) and that literacy instruction in L1 builds an underlying and conceptual proficiency strongly related to L2 development (Cummins, 1981). This interdependence principle postulates that instruction effective in promoting proficiency in L1 will result in its transfer to L2 provided that there is adequate exposure and motivation to learn L2 (ibid.).

Two of the most widely used models for instruction are the concurrent method and dual language (also known as preview-review) method. Concurrent translation uses both L1 and L2 interchangeably throughout the lesson, while preview-review involves an introduction to the lesson in one language (usually L1), teaching the lesson in L2, and then reviewing and reinforcing the content in L1 (Meyerowitz, 1985,

p. 5). Both methodologies can be implemented by two teachers, one modeling each language, or by one bilingual teacher.

Concurrent translation, often criticized by researchers of bilingual education, is probably the most commonly used model. One important criticism of the model is that with the continual translation from L1 to L2, students begin to listen selectively, tuning out the language that they least understand (usually L2) and " . . . simply wait for translation into their dominant language" (Gaarder, 1978 and Wong Fillmore, 1980 cited in Ovando and Collier, 1985, p. 82). Conversely, dual language instruction seems to support the notion of building background knowledge (Tierney and Cunningham, 1984) in that it provides contextual support through schema building prior to the lesson, facilitating learning and providing comprehensible input (Krashen, 1985) in order to enhance L2 acquisition.

Although there is a large and growing body of literature in bilingual education, very little of it focuses on how different classroom methodologies affect children's development of second language literacy. The purpose of this study is to compare the gains made in second language vocabulary as a direct result of different literacy lessons implementing the previously mentioned bilingual models, concurrent translation and dual language (preview-review).

Review of the literature

Bilingual education and the use of the primary language

The United States Office of Education (1971) defines bilingual education as ". . . the use of two languages, one of which is English, as mediums of instruction for the same pupil population in a well organized program which encompasses all or part of the curriculum and includes the study of the history and culture associated with the mother tongue. A complete program develops and maintains the children's self-esteem and a legitimate pride in both cultures" (Ovando and Collier, 1985, p. 2).

Since the passing of the Bilingual Education Act (Title VII) in 1968, there has been much controversy over this use of two languages in instruction. In 1978 the American Institute for Research (AIR) reported that bilingual education had made "no consistent significant impact" on the achievement of LEP students (Crawford, 1989, p. 87). Following shortly in 1981, the Baker and de Kanter report reviewed research literature on bilingual education. They concluded that "no consistent evidence supports the effectiveness of transitional bilingual education" (ibid., p. 92). However, it is important to note that much of the early bilingual research dealt with success in promoting English language proficiency rather than the actual effectiveness of programs in enhancing overall academic achievement of LEP students.

> This flows from its view of Title VII as remedial education, as a way of addressing *language handicaps*. By contrast, most bilingual education researchers and practitioners judge programs on how effectively they promote all-round cognitive development. The speed of English acquisition matters less than its quality–whether it provides a solid foundation for future academic achievement (Crawford, 1989, p. 91).

Willig (1985), questioning previous findings, specifically those of Baker and de Kanter, reanalyzed the same group of studies, finding consistent small or moderate effects favoring bilingual education. She criticized the choice of programs, citing faulty research methodology and inconsistent sampling as reasons to reconsider their findings. She concluded that well designed and executed bilingual programs promote academic success. This is consistent with the data from Krashen and Biber (1988) who examined seven bilingual programs in California and found that "children who participate in properly designed bilingual education programs acquire English rapidly, and typically achieve at grade level norms for English and math after three to five years" (p.63).

Ramirez, et. al. (1991a,b) compared three types of bilingual programs: English immersion models, early- and late-exit models. In their study, immersion models are characterized by all-English instruction with native language support " . . . used on an

informal, as needed basis" (Ramirez, et. al., 1991a, p. 36), while both late- and early-exit models offer support in formal instruction in the native language of the child, in this case Spanish. The difference between these two bilingual programs lies in the amount of native language instruction used and the duration of the support, with more L1 instruction and support in the late-exit programs. Thus, not surprisingly, the three models are distinguished by "the languages used, the amount of time they are used, and the length of time students receive instruction in these languages" (1991b, p. 418). The authors found no significant difference in achievement between immersion and early-exit programs, but that late-exit students significantly outperformed both groups.

These recent findings serve to support the notion of primary language support as facilitating cognitive growth in addition to English language proficiency. Historically there has been a great deal of conflict as to whether the use of L1 in literacy instruction facilitates or detracts from the development of literacy in L2. As previously mentioned, the use of L1 has been viewed as a handicap rather than a resource to be used for cognitive and linguistic development, and its use has been discouraged. In 1956 Singer (cited in Legarreta-Marcaida, 1981) discussed findings indicating that tests in the weaker or non-dominant (L2) language seemed to show that bilingual students were less intelligent than their monolingual peers. However, as early as 1953, experts on bilingual education were contradicting such findings and assumptions. "An axiom of bilingual education is that the best medium for teaching is the mother tongue of the student" (UNESCO, 1953, cited in Engle, 1975, p.1). Supporting the view that instruction in the vernacular positively affects learning, Fishman (1989), citing Cummins (1981), states that:

> the usual mainstream evaluation of the merits of minority mother tongue instruction is from the point of view of whether such instruction facilitates acquisition and mastery of the socially dominant language. There is now more than enough evidence that this is indeed the case for certain types of student populations, namely those derived from low home and

> community literacy environments. It seems advisable to devote a large amount of time over a number of years to literacy in these students' mother tongues, thereby building a strong foundation of native literacy skills upon which the edifice of second language literacy can be securely erected (p. 467).

In addition to societal factors, evidence from the field of psycholinguistics supports literacy development in the native language. "From a theoretical perspective, learning to read in one's home language will be easier than learning to read in a second language, particularly an unfamiliar one. The learner brings to the task of learning to read his or her native language a syntactic and semantic knowledge of the language which makes it possible to predict the meaning of the written form" (Goodman, Goodman and Flores, 1979, p. 19). Snow (1990) asserts that depriving children of initial literacy in L1 may have actually negative effects. She cites a study by Collier (1987), who found that students who received initial literacy instruction in their L2 showed deficits in second language acquisition as long as five years after the initial instruction took place, while their peers who had arrived in the country at a later age after receiving initial instruction in L1 performed better. Similar conclusions were drawn by teachers of LEP students in the Ramirez, et al. (1991b) study. They report that ". . . .at a practical level, immersion strategy and early-exit teachers feel that most LEP students need five or more years of special instruction prior to mainstreaming. Neither program is able to provide a 'quick fix'" (p.432).

Cummins (1981, 1984, 1989) substantiates the importance of initial L1 literacy with his interdependence principle. He states "to the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn Ly" (Cummins, 1981, p. 29). He further argues that " . . . although the surface aspects (e.g. pronunciation, fluency, etc.) of different languages are clearly separate, there is an underlying cognitive/academic proficiency which is

common across languages. This 'common underlying proficiency' makes possible the transfer of cognitive/academic or literacy-related skills across languages" (Cummins, 1989, p. 44). Thus, not all psycholinguistic aspects of reading are language specific; rather, they often involve many of the same cognitive processes regardless of language.

Thonis (1981) discusses transfer of skills from L1 to L2, clearly supporting the notion of a common underlying proficiency. She states that "though *specific* languages may differ greatly in their observable forms, students responding to a new language may be able to demonstrate a kind of *general* understanding and make sense of the unfamiliar. They seem to transfer skills across languages with remarkable success" (Thonis, 1981, p. 149). Crawford (1989), citing Troike, adds that "the more fully that content knowledge and skills are developed in the native language, the faster and more effectively they can be transferred into the second language" (p. 107). As such, it can be seen that the primary language, far from being a handicap, is actually a great resource in the academic development of the individual.

Snow (1990) also discusses the transferability of skills across languages agreeing that while some aspects are language specific others are " . . . usable in any language one knows" (p. 66). The California State Department of Education (1990) states " . . . the cognitive strategies and knowledge base developed in the home language are quickly transferrable to a second language. Therefore, continued home language development is ultimately a form of English-language instruction of the most sophisticated and effective order" (p. 21). Given the transferability of reading skills possible from one language to another, primary language instruction serves to facilitate the acquisition of L2 as well as serve as a base for continued learning within the classroom setting. "Bilingual education, in fact, may be the best English program we have" (Krashen and Biber, 1988, p. 63).

Bilingual Methodologies

Within the framework of bilingual education there are several instructional methodologies. Two of the most commonly used are concurrent translation and preview-review, or the dual language approach. One concern with the definition of said methodologies is the lack of agreement in the field as to what constitutes each one. While it is repeated in the literature that no definitive description of the concurrent approach exists (Jacobson, 1981), it is generally agreed upon that concurrent and preview-review are different methodologies. However, Wong Fillmore and Valadez (1986) go so far as to include preview-review under the general category of concurrent methodologies. These definitional discrepancies can be seen as a reflection of the lack of an established common body of terminology in the field.

Concurrent translation is operationally defined by the Office of Bilingual Bicultural Education as instruction when "during lessons, two languages are used interchangeably. Special care is taken to avoid direct translation. One person may deliver the lessons using both languages or two teachers/aides may be utilized, each modeling a different language" (OBBE, 1979, p. 40, cited in Meyerowitz, 1985, p. 22). Problems with this methodology stem from the fact that students screen out the non dominant language, and that the teacher may tend to use English more than the L1 of the child, thus " . . . students receive the implicit message that English is the more important language" (Legarreta-Marcaida, 1981, cited in Ovando and Collier, 1985, pp. 82-83). Ramirez, et al. (1991a,b) also found evidence that students in bilingual programs received differential amounts of L1 and L2 instruction with a greater amount of time spent in the L2 or English.

Jacobson (1981) criticizes the concurrent approach citing three critical features: "the randomness of the alternation, the syntactic nature of the switches and the use of translation" (p. 16). While the first two features deal with the timing of the switch between languages and possible negative effects of said switches, the third addresses

the problems which arise due to the nature of translation into the learner's L1. He states that such a switch effectively eliminates the need for the child to understand the second language, and that " . . . they can avoid all second language learning by only following the teacher's explanations in their first language and disregard the teaching in the second language altogether" (ibid.).

In order to compensate for these problems but still allow for native language support during instruction, Jacobson (1981) proposed a "new concurrent approach" which offered guidelines to overcoming several of the problems implicit in the old model. He found that "switching back and forth between the two languages of a community is a common practice among bilinguals, and the teacher who employs such a strategy merely does what she is familiar with when she interacts informally in her community" (Jacobson, 1981, p. 15). Within this approach the teacher uses both the L1 and L2 of the students according to a set of rules dictated by sociolinguistic cues within the normal realm of community discourse. This switching between two languages, formally called code-switching is defined as " . . . the alternate use of two languages [which] can occur at the word, phrase, clause, or sentence level. Code-switching is considered by linguists to be a creative use of language by bilinguals who know both codes (languages) well" (Ovando and Collier, 1985, p. 86). Since within the new concurrent approach teachers are code-switching as opposed to translating, it is proposed as a more acceptable method of instruction. While this may be an improvement over the traditional concurrent approach, it still has some of the same inherent problems. Although those students that exhibit some control over the second language may benefit by receiving part of the message with the L1 acting as a semantic bridge to the L2, those with little or no L2 proficiency may not receive that benefit; they tend to wait for instruction in the dominant language, once again effectively eliminating an opportunity for second language acquisition.

Code-switching also implies a certain amount of knowledge of both codes, linguistic as well as cultural, and "code-switchers use both languages only with speakers who know both codes" (Ovando and Collier, 1985, p. 87) understanding that each language can be used in a way to convey the speakers' intent in a precise manner. Given the number of students in class with little or no proficiency in their second language it is important to question whether they are actually participating in code-switching or once again simply waiting for the code they understand.

Dual language, also known as the preview-review method, uses the two languages separately. This approach is best implemented " . . . using two language models–a modified team teaching approach" (Meyerowitz, 1985, p. 26). This model involves the presentation of subject matter material to whole classes of students and one of its distinct advantages is that " . . . the two languages are not interchanged, and the time spent in each language is equal" (ibid.). In order to implement this technique, the class is separated into dominant language groupings where a synopsis of the content is presented in order to build background knowledge in L1. The lesson is then taught in the target language. After the lesson a review is done in language dominant groupings, expanding and reinforcing that which was taught during the lesson. Although mainly used for "one-way" bilingual programs, "ideally, this design works best in an integrated, two-way bilingual program with English-speaking students included" (Ovando and Collier, 1985, p. 84).

The support for this approach is based the assumption that both languages are used in fairly equal amounts and are kept separate. Wong Fillmore and Valadez (1986) state that:

> the maintenance of a balance in the use of the two languages is regarded by some to be a critical factor in achieving both objectives of bilingual programs. There must be enough L1 instruction to allow LEP students to make the progress expected of them in the school's curriculum, and enough L2 instruction to allow them to learn English. But in each case, how much is enough? Some experts believe than in order

> for both functions to be served, the two languages must be used in about equal parts in the teaching of subject matter (p. 655).

Keeping the languages separate also eliminates the use of code-switching as a means of support for the student. Meyerowitz (1985) found that student time on task increased when the L1 was used as the language of instruction and an improvement in achievement scores was noted. While she considered a shorter "gap time" between languages as a positive factor and therefore supported the new concurrent method as a means of favorably impacting achievement, she was not specifically examining English language acquisition and the importance of comprehensible input. With the preview-review method the teacher needs to rely on other means besides the L1 of the student in order to ensure that the lessons are comprehensible. In this manner students can acquire the second language while they are also learning the material being taught.

Attention must also be given to the notion of teacher competence in each methodology and its effect on learning. Thonis (1991) discusses the issue of specific competencies for teachers of language minority students that should be addressed during teacher education. Although she provides an exhaustive checklist she does not discuss the relative effects or interactions of the teachers' knowledge and skill with particular methodologies and their relationship to promoting successful second language acquisition. She states that it is important for teachers to have a strong theoretical background in second language acquisition, first and second language literacy as well as experience in a variety of methods. She then describes competent teachers as those who know that " . . . different materials and methods may be necessary for some students; and they are not locked into one single approach for everyone" (p. 291), indicating that teachers need to be competent in a variety of methods in order to be effective.

The role of building background knowledge in vocabulary acquisition

Tierney and Cunningham (1984) state that building background knowledge is the key to success in reading comprehension. This is especially critical in terms of the language minority student who is learning a second language. As readers acquire concepts within a certain domain, there are two areas necessary to consider: the domain itself with regard to its structure and lexicon, as well as prior knowledge in said domain (Drum and Konopak, 1987, p. 77). Tierney and Cunningham (op. cit.) reported on research that supported a causal relationship between background knowledge and reading comprehension (p. 612). They suggested using prereading activities that focus on building background knowledge by previewing content and activating existing schemata, or knowledge already stored in the memory.

Mezynski (1983) discussed the relationship between reading comprehension and vocabulary knowledge. She commented that

> the presence of a substantial psychometric relationship between vocabulary knowledge and reading comprehension surprises no one. Indeed, it is difficult to imagine how a reader could comprehend text in which most of the words were unfamiliar. Although a strong tie between vocabulary knowledge and reading comprehension seems obvious, there remains much to learn about the process of acquiring word knowledge and about how that relates to learning from text (p. 253).

In terms of this learning from text, Sternberg (1987) suggests that the process of acquiring word knowledge involves inferring from context: "even if one learned only a small proportion of the words thus encountered in the contexts in which they are presented, one could plausibly develop a vocabulary of tens of thousands of words, which represents only an infinitesimal proportion of our exposure to words" (p. 90).

Nagy and Anderson (1984) looked at the amount of words in print in English and concluded that " . . . because of the sheer volume of vocabulary that students will encounter in reading, any approach to vocabulary instruction must include some methods or activities that will increase children's ability to learn words on their own. Any attempt to do this could be based on one or more of three possible emphases:

Motivation, inferring word meanings from word parts (morphology), and inferring word meanings from context" (p.325). Increasing vocabulary in turn engenders more successful reading comprehension which is often used as measure of success in literacy. In addition, the more experience one has with the word in question the more likely the word will become part of one's vocabulary. Stahl (1986) reports that an important factor in vocabulary acquisition is the number of times the student is exposed to the word as well as information provided about that word.

> It appears that the following are attributes which can make vocabulary instruction effective at increasing reading comprehension: multiple exposures to words, exposure to words in meaningful contexts, rich or varied information about each word, establishment of ties between instructed words and students' own experience and prior knowledge, and an active role by students in the word learning process (Nagy and Herman, 1985, p. 19).

Given the amount of exposure to vocabulary words in school and at home "many believe that incidental learning of words from context while reading is, or at least can be, the major mode of vocabulary growth once children have really begun to read" (Nagy and Herman, 1987, p. 24). Nagy and Herman (1987) continue by stating that "because the bulk of children's vocabulary growth occurs incidentally, that is, outside of situations specifically devoted to word learning, the single most important goal of vocabulary instruction should be to increase the amount of incidental word learning by students" (p. 26), including a focus on metacognitive strategies and, most importantly, increasing the actual amount of time spent reading. This is equally as important for the second language learner who is learning vocabulary in her L2.

LeFrancois (1988) discusses Ausubel's theory of meaningful verbal learning. According to Ausubel, in order to learn something new there must be something in a student's cognitive repertoire which provides a hook to which the knowledge to be acquired can be attached. He proposes using advance organizers where the learners are provided with preorganized information that serves the function of facilitating meaningful learning by acting as a schematic framework for future knowledge. This is

consistent with the notion that in reading in a second language schema building is important for comprehension. "Second language readers attempt to provide schemata to make sense of texts, and they do so persistently. However, these efforts will fail if the reader cannot access the appropriate existing schemata, or if the reader does not possess the appropriate schemata necessary to understand a text" (Carrell and Eisterhold, 1988, p. 81). Use of advance organizers can activate the necessary schemata by building a supportive framework for the second language learner.

Boyle and Peregoy (1990) use the term literacy scaffolds to describe " . . . temporary frameworks that offer students immediate access to the meanings and pleasure of print" (p. 194). Within the framework of second language learning, support in building background knowledge can serve as such a scaffold or schema. "While reading processes are similar for first- and second-language readers, two special characteristics of second-language learners may make comprehension slower and more arduous: limited second-language proficiency and background knowledge that do not correspond to the content of typical school texts" (Clarke, 1980; Cziko, 1980; Carrell and Eisterhold, 1988; cited in Boyle and Peregoy, 1990, p. 195). Therefore building background knowledge can help students to deal with some of the challenges inherent in second language learning. One way to facilitate said building of prior knowledge is though the use of patterned and predictable books. "For both first- and second-language learners, the predictable patterns allow beginning readers and writers to become immediately involved in a literacy event" (Boyle and Peregoy, 1990, p. 196). Rather than having to wait until they have the content knowledge or reading competence necessary to participate as an expert, this scaffold allows the novice to become an active participant in the processes of learning to read and write (Applebee and Langer, 1983). As Bruner (1983) states " . . . where before there was a spectator, let there now be a participant" (p. 60).

Reading aloud and vocabulary acquisition

Krashen (1985) asserts that " . . . reading exposure may be the primary means of developing reading comprehension, writing style, and more sophisticated vocabulary and grammar" (p. 90). He adds that reading aloud is closely related to reading and serves to interest children in books thereby encouraging them to read on their own. Routman (1991) agrees, stating,

> reading aloud is seen as the single most influential factor in young children's success in learning to read. Additionally, reading aloud improves listening skills, builds vocabulary, aides reading comprehension, and has a positive impact on students' attitudes toward reading (p. 32).

The relationship between reading aloud and literacy development has also been substantiated by research findings. Hall (1987, citing Moon and Wells, 1979 and Wells, 1985), reports correlations between reading test scores at age seven and children's preschool knowledge about books and literacy as evidenced by frequency of listening to stories. These findings are consistent with results of other studies on story reading and incidental acquisition of vocabulary (Elley, 1989; Lambert, 1991).

Heath (1983) in her study of two communities and the effects of attitudes towards literacy on their children's development, supports this notion of reading aloud facilitating the growth of literate behaviors:

> as the children of the townspeople learn the distinctions between contextualized first-hand experiences and decontextualized representation of experience, they come to act like literates before they can read. They acquire the habits of talk associated with written materials, and they use appropriate behaviors for either cooperative negotiation of meaning in book-reading episodes or story-creation before they are themselves readers (p. 256).

Elley (1980,1989) and Elley and Mangubhai (1983) examined the second language vocabulary acquisition of children who listened to stories. They found " . . rapid growth in the English language by elementary school students exposed to many storybocks" (Elley, 1989, p. 176). In this study, students exposed to a story three times

without intervention showed a mean vocabulary gain of 19 percent, while students exposed once with minor explanations gained 20 percent, and the mean gain for students exposed three times with explanations was 33 percent. She concluded that stories read aloud with brief explanations offer a " . . . potential source for ready vocabulary acquisition. . . . students who start out with less vocabulary knowledge gain at least as much from the readings as the other students and that the learning is relatively permanent" (ibid., p. 180-184). Factors that influenced the acquisition of the vocabulary items included frequency of occurrence of the word in the story, amount of help that the context offered and the frequency of the occurrence of the word in picture form within the text.

Lambert (1991) replicated Elley's 1989 study and found that students who listened to stories in English showed similar gains in second language vocabulary acquisition. Incidental learning of vocabulary was related to the type of mediation the students received: " . . . the mediation (i.e., discussion and elaboration of meaning) inherent in sharing and reading stories that facilitates the acquisition of new vocabulary" (Lambert, 1991, p. 8). She further discussed the view that such meaning-based mediation is often lacking from formal spelling and vocabulary lessons.

Acquiring vocabulary from listening to stories supports the concept of incidental language learning as proposed by Krashen (1985), Nagy and Herman (1985) and Elley (1991). It can be assumed that children " . . . learn all the vocabulary and syntax they require in due course from repeated interactions with good stories, and that this learning would transfer to other modalities" (Elley, 1991, p. 378). Learning is facilitated by the context presented by the story and subsequent mediation. The story itself, along with said mediation, may serve to function as the scaffold necessary for such learning to take place.

Summary and conclusions

Research findings indicate that the use of the primary language is advantageous in promoting cognitive development as well as second language acquisition. Furthermore, examining the current state of the literature on bilingual methodologies and second language literacy development, there is little to support the use of concurrent translation. Although competence in the use of this methodology may improve its delivery it still does not eliminate its inherent problems. Krashen (1985) states that this method can have negative implications in terms of second language acquisition: "the first language can be used improperly as well, in a way that discourages comprehensible input. This occurs when *concurrent translation* is used" (p. 75). While such translation tends to inhibit second language growth by causing the learner to tune out the target language, there are other means of employing the primary language to facilitate the language development. Using the child's L1 to assist in the building of background knowledge which, in turn, serves to activate already established schemata, can support such language acquisition.

It is also important to contextualize language within such a schematic framework, such as in the form of a interesting and predictable story. Vocabulary acquisition would be no exception.

> Vocabulary is best learned when the target words are learned in context as there is a link between vocabulary and schemata. . . . if students are to develop proficiency in reading unfamiliar material, then teachers should provide contexts and schemata that support comprehension of both background knowledge and the text's structure (Andersson and Barnitz, 1984, p. 106).

That primary language support can serve as a scaffold to facilitate the link between background knowledge and the acquisition of new language seems logical. When used appropriately it aids in promoting meaningful learning which further builds the network of schemata available to the second language learner. What needs to be

examined now are the differences, if any, in language acquisition depending on the type of primary language support offered.

Data Collection

Rationale

Based on the review of research supporting the building of background knowledge as a means of facilitating literacy development both in first- and second-languages and the current state of the literature in bilingual methodologies, the present study was undertaken in order to look at the effectiveness of two prevalent methodologies used in bilingual classrooms today: concurrent translation and preview-review. Considering the theoretical reservations about the concurrent method, its wide practice and the limited amount of practical classroom research on its effectiveness, it is important to reflect on this methodology and examine alternatives. Given the possibility of using the preview-review method employing the primary language to build background knowledge or erect scaffolds to existing schemata for the child, specifically the second-language learner, this methodology was chosen for comparison with concurrent translation.

Hypotheses

Given the view that students will tune out the non-dominant language when hearing stories and that preview-review will be effective in building appropriate schemata to aid comprehension and further the acquisition of vocabulary, the researchers assume the following:

1. There will be no significant gains in English vocabulary acquisition for students in the concurrent translation group.

2. There will be significant gains in English vocabulary acquisition for students in the preview-review group.

3. Based on previous story-telling literature (Elley, 1989, Lambert, 1991) there will be a gain in of approximately 20% in the English vocabulary scores of the control group.

Given the above hypotheses, the null hypothesis is that there will be no significant difference in English vocabulary acquisition among three groups: control, concurrent translation and preview-review.

Methodology

Sample

Three third grade classes from a year round elementary school in the greater Los Angeles area were chosen for data collection. The classes were randomly selected from the school population to include students from all tracks currently in session. The school has approximately 1200 students, 88% of whom have Spanish as their primary language. Approximately 75% of the students who have Spanish as their primary language are classified as LEP students. The students come from fairly stable homes; most families own the single family homes where they live, and most children attend the school for several years. Approximately 85% of attending students participate in the government subsidized lunch and breakfast program. The school has a transitional bilingual program in which children are separated according to LEP status for initial reading instruction and later "transitioned" or changed over to English language arts when they reach a certain proficiency level in both L1 reading and English. Each class had a mixture of English and Spanish readers at various levels. The sample consisted of 32 girls and 28 boys in three groups, control: n = 16; concurrent: n = 21; preview-review: n = 23. Intact classes were randomly chosen for each of the three groups therefore generating unequal numbers in each group. All children included in the sample had Spanish as their L1.

Design

A quasi-experimental design was used. Students in three randomly selected classes were chosen to serve as the control (no treatment), concurrent translation, and preview-review groups. The children were given a pretest to assess their knowledge of selected vocabulary items (see Appendix A, page 34). The test consisted of twenty vocabulary items taken directly from the text selected for read aloud. Each vocabulary item was followed by four choices from which the student selected the most appropriate definition. Students were instructed to respond only to the words they knew, circling the correct response and crossing out the items they didn't know. Students were not penalized for incorrect answers in the scoring process, rather they were given one point for every correct answer. In order to test for reliability, two versions of the test were administered prior to data collection to a similar population (32 fifth grade students from the same school). The results showed a correlation of .981; $p = .0001$ indicating high reliability for the test.

The treatments were all administered by the same teacher. The book read aloud, *The Napping House* by Don and Audrey Wood, was chosen for its repetitious and pictorial representation of the target words as well as predictability to facilitate the use of contextual clues. After the administration of the pretest students in group one (control) listened to a story in English with no intervention or explanation of the story. Students in group two listened to the same story in English with the reader using the concurrent method (translating the story from one language to the other). Group three heard the same story in English after having the teacher build background knowledge by previewing important points and difficult vocabulary in Spanish (preview). They also reviewed the story in Spanish after the reading in order to reinforce important points (review). Pictures and role playing as well as the students' L1 were used during the preview and review in order introduce, elaborate and build background knowledge. All three groups were given a post test of the same vocabulary items after

the treatment to examine gains in scores. A delayed post test was administered one week later without rereading the story to look at retention rates.

Descriptive data

The raw data are reported in Appendix B (page 37). Table one reports the means, standard deviations and gains for the three groups, while figures one (page 20) and two (page 21) provide visual representations comparing the group means.

Table one: Means, (standard deviations) and gains for control and experimental groups.

	Control	Concurrent	Prev-Rev
Pre test	8.75	6.571	9.478
	(6.234)	(4.76)	(4.368)
Post test	10.438	7.333	14.87
	(6.938)	(5.462)	(5.446)
Delay Post	9.812	7.714	14.13
	(7.157)	(5.985)	(5.538)
Gains Pre-Post	**19%**	**12%**	**57%**

Figure one: Group means compared by treatment.

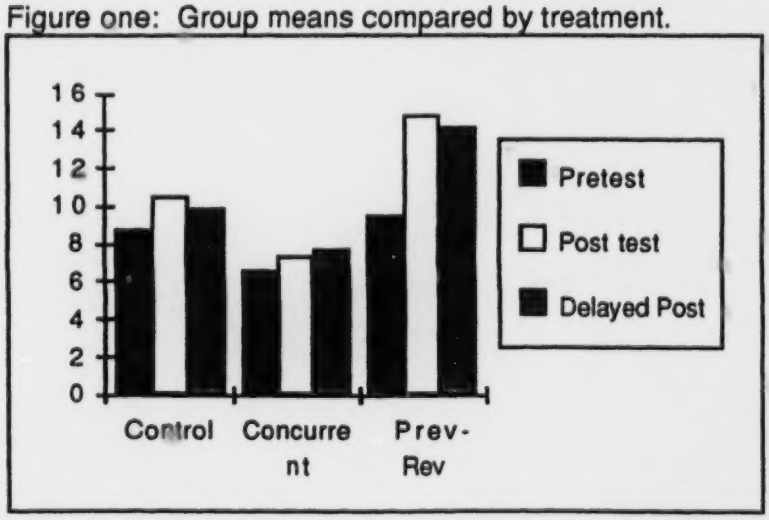
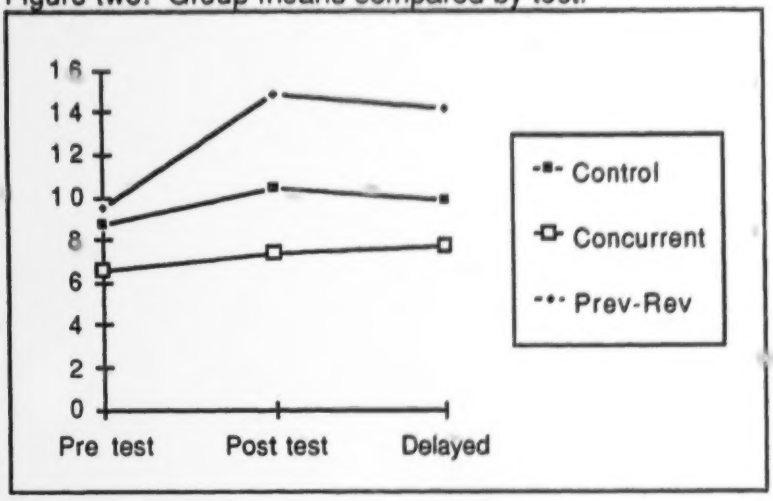


Figure two: Group means compared by test.



Of interest are the post test means for the concurrent and control groups. Note that the control group showed larger gains (see table one, page 20) than the concurrent group and that the concurrent group actually scored higher on the delayed post test one week later. This is consistent with the literature which suggests that students do not listen in the target language when an immediate translation follows. In addition, the literature on story-telling reports student gains of approximately 20% after listening to stories without further instruction (Lambert, 1991). Gains in the control group mirrored these results; there was an overall gain of slightly over 19% for students in that group. Students in the concurrent, on the other hand, showed gains of only 12% on the vocabulary test, while those in the preview-review group improved scores by an impressive 57%.

Data Analysis

In order to control for the effects of the pretest which can be viewed as a measure of student aptitude the regression approach was used. The post test was regressed on the pretest, after which the treatment was entered. As a means of cross validating the results a repeated measures MANOVA (multiple analysis of variance)

was used. Finally since both methods indicated significant differences for the treatment, one-way ANOVAs (analyses of variance), followed by post hoc Scheffés were used to determine where the significant differences lie.

Results

The major objective of this study was to determine the effects of the treatments (concurrent translation and preview-review) on vocabulary acquisition. This relationship was initially examined with a multiple regression. Due to the univariate nature of multiple regression, the post test, which had a high correlation ($r = .9192$; $p = .01$) with the delayed post test, was chosen as the dependent variable. Initial results (see table two) indicate that the pretest is the most significant predictor of success on the post test ($R^2 = .67581$; $p = .0000$). When the treatment is entered into the equation it can be seen that it too is significant (R^2 change = .05887; $p = .0008$), indicating that there is a significant effect due to the treatment.

Table two: Regression results.

Variable	Mult R	Rsquare	Change Rsq	Beta	F value	Sig F
Pre test	0.8221	0.6758	0.67581	0.8221	120.908	0.0000
Treatment	0.8571	0.7347	0.05887	0.2435	78.917	0.0008

Repeated measures MANOVA was then used to cross validate the results of the regression analysis. The results of the MANOVA omnibus tests confirm the findings of the regression, indicating significant differences between groups. Since repeated measures MANOVA was used due to the pretest/post test design, all tests were entered into the procedure. Since the effects of the treatments and their interactions with the various tests are significant (multivariate effects of the tests, Pillais = 0.4139, $F = 19.77315$, $p = .0000$; interaction effects of the treatments and the tests, Pillais = 0.32778, $F = 5.58639$, $p = .0000$), it is possible to examine the univariate tests for both

effects. The averaged tests of significance which again report significant differences for the interaction are given (see table three). These can be compared to the univariate F tests in a regular MANOVA which generate the same results as one-way ANOVAs.

Table three: Averaged tests of significance.

	S. S.	D.F.	M.S.	F	Sig. of F
Within Cells	554.2	114	4.86		
Test	237.57	2	118.78	24.43	.0000
Treat by test	151.84	4	37.96	7.81	.0000

Given that the effects of the interaction between the treatments and the tests are also significant at the .0000 level, *the null hypothesis that there is no difference between the groups is rejected.*

Finally, to examine group differences and exactly where they lie a series of one-way ANOVAs followed by post hoc Scheffés were run (see table four).

Table four: One-way ANOVAs on pre, post and delayed post tests.

	D.F.	Between SS	Between MS	F ratio	F prob.
Pre test	2	97.8513	48.9257	1.9155	0.1566
Post test	2	631.6371	315.8186	9.1323	0.0004
Delayed	2	470.4014	235.2007	6.2086	0.0036

Examination of the results of the ANOVAs indicates that while there is no significant difference between groups on the pre test ($F = 1.9155$; $p = 0.1566$), both the post test ($F = 9.1323$; $p = 0.0004$) and the delayed post test ($F = 6.2086$; $p = 0.0036$) reflect significant differences for the treatment. The post hoc Scheffé tests report that the differences on the post test and the delayed post test lie between the concurrent translation group and the preview-review group.

Discussion

The present study was undertaken to compare two bilingual methodologies: concurrent translation and preview-review, and their effects on the acquisition of second language vocabulary. Results indicate that there is a significant difference between preview-review and concurrent translation in terms of English vocabulary acquisition as measured by a vocabulary test. That children learn and retain more vocabulary as a result of a methodology that builds background knowledge by employing the primary language in a scaffolding type activity can be clearly seen.

What is even more important to note is that the use of the primary language in the form of concurrent translation does not significantly facilitate this vocabulary acquisition. Students in the concurrent group made mean gains of 12 percent as compared to 19 percent for the control group and 57 percent for the preview-review group (see table 1, page 20) indicating that the concurrent group made less gains than even the group with no treatment. These findings seem to be consistent with the previously mentioned point that students tune out the non-dominant language when they know that a translation into the dominant language will immediately follow. In the case of vocabulary acquisition in the second language, this would lead to less acquisition than for those students who listened to the story only in English. This supports the view of keeping both languages separate in terms of instruction.

An interesting result is the fact the concurrent translation group is the only one that performed better on the delayed post test than on the post test administered immediately after hearing the story. This would seem to indicate that the learning due to repeating the test may have been more effective than the treatment (Pedhazur, 1982). However, a t-test run on the means (post, 7.333 and delayed post, 7.714) shows that this difference is not significant ($t = -.381$; $p \leq .375$).

Furthermore, the dramatic gains of the preview-review group (57 percent) surpass even Elley's (1989) findings of a growth of 33 percent with three repetitions of

a story and brief explanations. While this story was only read once, the preview-review technique provided enough context to activate the schemata and assist the children to acquire the target vocabulary. Stahl (1986) also found that multiple exposures to vocabulary facilitated their acquisition. While the preview-review group did not hear the story more than once, the type of mediation offered served the function of providing repeated exposure to target words. Elley (1989) found that the gains were permanent. In this study gains were maintained on the delayed post test without further instruction.

An important result that cannot be overlooked is the fact that the Scheffé test indicated that there is no statistically significant difference between the control group and the preview-review group on either of the post tests. Examining the means and standard deviations (see table one, page 20) shows the differences in gains to be rather diverse: 19 percent for the control group; 57% for the preview-review group. Possible reasons for this lack of statistical significance are the large standard deviations, specifically for the control group which has a standard deviation of 6.938 on the post test as compared to 5.446 for the preview-review group and a standard deviation of 7.157 as compared to 5.538 on the delayed post test. These standard deviations indicate a large variance in scores given a range of possible scores from 0 to 20. In addition, while a sample of 60 seems adequate, the fact that this study focused on three groups makes sample size a limitation. Replication with a larger sample would serve to eliminate this problem and is discussed in more detail in the section on implications.

Conclusions

Primary language support assists the student in acquiring second language vocabulary, specifically when there is no direct translation into the L1. When methodologies which use their L1 as a scaffold to support the learner are properly

engaged, substantial vocabulary acquisition can result. Although on the surface, the notion of translating the language into the students' L1 would seem reasonable, Krashen's input hypothesis explains why this is not so. "Having no reason to pay attention, they receive no comprehensible input in English. . . . similarly, the teacher using concurrent translation has little incentive to make the lesson understandable in the second language, that is to help the students 'negotiate meaning'" (Crawford, 1989, p.103).

The key to vocabulary acquisition, as well as language acquisition, can be seen as *mediation of meaning.* It is the teacher's role to mediate such acquisition using methodologies and techniques which focus her/his attention, as well as that of the learner on understanding the text at hand. The results of this project show the positive effects of adhering to such a methodological and theoretical framework.

These findings support previous research indicating that listening to stories facilitates vocabulary acquisition. While this project dealt specifically with second language learners' L2 vocabulary acquisition, it has implications for all learners. That the primary language, as well as other forms of comprehensible input, were successfully used as an advance organizer or scaffold to build background knowledge for language minority students lends supports to the argument of this paper that preview-review is a more effective method for L2 vocabulary acquisition.

Students should be actively engaged in language learning before they have complete control over their second language (Hudelson, 1989). If use of the primary language facilitates vocabulary acquisition, as is evidenced by the present study, it should be more widely employed to facilitate such acquisition. Only when educators begin to look at the pedagogical implications of such research can effective change be implemented and bilingual programs be viewed as success stories.

Implications for further study

While this study examined the impact of two bilingual methodologies on second language vocabulary acquisition, closer attention needs to be paid to the use of concurrent translation and its potentially negative effects with regard to other areas in bilingual education. If the purpose of translation is one other than second language acquisition, i.e., giving directions, disseminating information, etc., then its use may be warranted. Nonetheless, it is important to evaluate the potentially lost second language learning opportunities that exist when proper contextual support is available.

Benefit could be derived from replicating this study with a larger sample. As previously stated, the sample size of 60 was inadequate to derive statistical significance between such varied gains as 19 percent and 57 percent. In that this study compared the effectiveness of treatments on three groups it would seem appropriate to use approximately twice as many students. One problem was that several students were absent on the day of the delayed post test, eliminating them from the sample. This problem would not have as much impact on the results with a larger sample size. It would also be beneficial to look at the effects of the treatment over a longer period of time in order to further examine the retention rates (Elley, 1989). While the results of this project are both significant and interesting, additional study would serve to make their implications more generalizable.

Finally, further research needs to be done in the area of building background knowledge in instructional contexts with LEP students. Specifically, the notion of scaffolding as a means of supporting second language acquisition and enabling the student to directly participate in literacy events prior to becoming competent in that second language needs to be investigated. By examining questions that deal with the use of the primary language as support for the LEP student, research can assist policy makers and practitioners to enable students to become fully bilingual, biliterate individuals.

References

Ammon, M. S. (1987). "Patterns of performance among bilingual children who score low in reading." in Goldman, S. R. and Trueba, H. T. (Eds.). *Becoming literate in English as a second language.* Norwood, NJ: Ablex.

Andersson, B. V. and Barnitz, J. G. (1984). "Cross-cultural schemata and reading comprehension instruction." *Journal of reading*, Vol. 28, No. 2, pp. 102-108.

Applebee, A. N. and Langer, J. A. (1983). "Instructional scaffolding: Reading and writing as natural language activities." *Language Arts*, Vol. 60, No. 2, pp. 168-175.

Boyle, O. W. and Peregoy, S. F. (1990). "Literacy scaffolds: Strategies for first- and second-language readers and writers." *The Reading Teacher*, Vol. 44, No. 3, pp. 194-200.

Bruner, J. S. (1983). *Child's talk: Learning to use language.* New York, NY: Norton.

California State Department of Education. (1990). *Bilingual education handbook: Designing instruction for LEP students.* Sacramento, CA: Bilingual Education Office.

Carrell, P., Devine, J. and Eskey, D. (1988). *Interactive approaches to second language reading.* New York, NY: Cambridge University Press.

Carrell, P. and Eisterhold, J. (1988). "Schema theory and ESL reading pedagogy." in P. Carrell, J. Devine, and D. Eskey, (Eds.). *Interactive approaches to second language reading.* New York, NY: Cambridge University Press.

Crawford, J. (1989). *Bilingual education: History, politics, theory and practice.* Trenton, NJ: Crane Publishing Company, Inc.

Cummins, J. (1981). "The role of primary language development in promoting educational success for language minority students." in California State Department of Education (Ed.). *Schooling and language minority students: A theoretical framework.* Los Angeles, CA. EDAC.

Cummins, J. (1984). *Bilingualism and special education: Issues in assessment and pedagogy.* San Diego, CA: College Hill Press.

Cummins, J. (1989). *Empowering minority students.* Sacramento, CA: CABE.

Dole, J. A., Valencia, S. W., Greer, E. A., and Wardrop, J. L. (1991). "Effects of two types of prereading instruction on the comprehension of narrative and expository texts." *Reading research quarterly*, Vol. 26, No. 2, pp. 142-159.

Drum, P. A. and Konopak, B. C. (1987). "Learning word meanings from written context." in McKeown, M. G. and Curtis, M. E. (Eds.). *The nature of vocabulary acquisition.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Elley, W. B. (1980). "A comparison of content-interest and structuralist reading programs in Niue primary schools." *New Zealand journal of educational studies,* Vol. 15, pp. 39-53.

Elley, W. B. (1989). "Vocabulary acquisition from listening to stories." *Reading research quarterly*, Vol. 24, No. 2, pp. 174-188.

Elley, W. B. (1991). "Acquiring literacy in a second language: the effect of book-based programs." *Language learning*, Volume 41, No. 3, pp. 375-411.

Elley, W. B. and Mangubhai, F. (1983) "The impact of reading on second language learning." *Reading research quarterly*, Vol. 19, No. 1, pp. 53-67.

Engle, P. L. (1975). *The use of vernacular languages in education: Language medium in early school years for minority language groups.* Arlington, VA: Center for Applied Linguistics.

Fishman, J. A. *Language and ethnicity in minority sociolinguistic perspective.* Philadelphia, PA: Multilingual Matters LTD.

Goodman, K., Goodman, G. and Flores, B. (1979). *Reading in the bilingual classroom: Literacy and biliteracy.* Rosslyn, VA: Interamerican Research Associates, Inc.

Hall, N. (1987). *The emergence of literacy.* Portsmouth, NH: Heinemann.

Heath, S. B. (1983). *Ways with words: Language, life and work in communities and classrooms.* New York, NY: Cambridge University Press.

Hopstock, P. J., Rudes, B. A., Fleischman, H. L., Zehler, A., Shaycoft, M. F., Goldsamt, M. R., Bauman, J. E., Burkheimer, G. J. and Ratner, M. (1984). *The national longitudinal evaluation of the effectiveness of services for language-minority limited-English-proficient students.* Arlington, VA: Development Associates. Inc.

Hudelson, S. (1989). *Write on: Children writing in ESL.* Englewood Cliffs, NJ: Prentice Hall Regents.

Jacobson, R. (1981). "The implementation of a bilingual instructional model: The new concurrent approach." in Padilla, R. (Ed.). *Bilingual education technology.* Ypsilanti, MI: Eastern Michigan University Foreign Language Department.

Krashen, S. D. (1985). *Inquiries and insights: Second language teaching, immersion and bilingual education, literacy.* Hayward, CA: Alemany Press.

Krashen, S. D. and Biber, D. (1988). *On course: Bilingual education's success in California.* Sacramento, CA: CABE.

Lambert, J.G. (1991). "The effects of oral story sharing on vocabulary acquisition in English as a second language." Unpublished paper. Los Angeles, CA: USC.

LeFrancois, G. R. (1988). *Psychology for teaching.* Belmont, CA: Wadsworth Publishing Company.

Legarreta-Marcaida, D. (1981). "Effective use of the primary language in the classroom." in *Schooling and language minority students: A theoretical framework.* Los Angeles, CA: California State University, Los Angeles. pp. 83-116.

Meyerowitz, L. M. (1985). *An experimental study of bilingual teacher instructional behaviors, student time on task and performance.* Unpublished doctoral dissertation. Los Angeles, CA: USC.

Mezynski, K. (1983). "Issues concerning the acquisition of knowledge: Effects of vocabulary training on reading comprehension." *Review of educational research*, Vol. 53, No. 2, pp. 253-279.

Nagy, W. E. and Anderson, R. C. (1984). "How many words are there in printed school English?" *Reading research quarterly*, Vol. 19, No. 3, pp. 304-330.

Nagy, W. E., Anderson, R. C. and Herman, P. A. (1987). "Learning word meanings from context during normal reading." *American educational research journal*, Vol. 24, No. 2., pp. 237-270.

Nagy, W. E. and Herman, P. A. (1985). "Incidental vs. instructional approaches to increasing reading vocabulary." in *Educational perspectives*, Vol. 23, No. 1, pp. 16-21.

Nagy, W. E. and Herman, P. A. (1987). "Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction." in McKeown, M. G. and Curtis, M. E. (Eds.). *The nature of vocabulary acquisition.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Norusis, M. J. (1990). *SPSS/PC+ advanced statistics 4.0 for the IBM PC/XT/AT and PS/2.* Chicago, IL: SPSS Inc.

Olsen, L. and Chen, M. T. (1988). *Crossing the schoolhouse border: Immigrant students and the California public schools.* Los Angeles, CA: California Tomorrow.

Ovando, C. J. and Collier, V. P. (1985). *Bilingual and ESL classrooms: Teaching in multicultural contexts.* New York, NY: McGraw-Hill, Inc.

Pedhazur, E. J. (1982). *Multiple regression in behavioral research: Explanation and prediction.* New York, NY. Holt, Rinehart and Winston.

Ramirez, D. J., Yuen, S. D., Ramey, D. R. and Pasta, D. J. (1991a). *Final report: Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children, Volume I.* San Mateo, CA: Aguirre International.

Ramirez, D. J., Yuen, S. D., Ramey, D. R. and Pasta, D. J. (1991b). *Final report: Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children, Volume II.* San Mateo, CA: Aguirre International.

Richards, J. C. and Rodgers, T. S. (1986). *Approaches and methods in language teaching: A description and analysis.* New York, NY: Cambridge University Press.

Roger, E. W. and Olsen, B. (1991). "Results of a K-12 and adult ESL enrollment survey–1991." *TESOL Matters*, Vol. 1, No. 5, p. 4.

Routman, R. (1991). *Invitations: Changing as teachers and learners K-12.* Portsmouth, NH: Heinemann.

Smith, F. (1988). *Understanding reading: A psycholinguistic analysis of reading and learning to read.* Hillsdale, NJ: Lawrence Erlbaum Associate.

Snow, C. E. (1990). "Rationales for native language instruction: Evidence from research." in Padilla, A. M., Fairchild, H. H., and Valadez, C. M. (Eds.). *Bilingual education: Issues and strategies.* Newbury Park, CA: Sage Publications.

Stahl, S. A. (1986). "Three principles of effective vocabulary instruction." *Journal of reading*, Vol. 29, No. 7, pp. 662-668.

Stern, H. H. (1983). *Fundamental concepts of language teaching.* Oxford, UK: Oxford University Press.

Sternberg, R. J. (1987). "Most vocabulary is learned from context." in McKeown, M. G. and Curtis, M. E. (Eds.). *The nature of vocabulary acquisition.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Thonis, E. W. (1991). "Competencies for teachers of language minority students." in McGroarty, M. E. and Faltis, C. J. (Eds.). *Languages in school and society: Policy and pedagogy.* New York, NY: Mouton de Gruyter.

Thonis, E. W. (1981). "Reading instruction for language minority students." in California State Department of Education (Ed.). *Schooling and language minority students: A theoretical framework.* Los Angeles, CA. EDAC.

Tierney, R. J. and Cunningham, J. W. (1984). "Research on teaching reading comprehension." in Pearson, D. (Ed.). *Handbook of reading research.* New York, NY: Longman.

Willig, A. C. (1985). "A meta-analysis of selected studies on the effectiveness of bilingual education." *Review of educational research*, Vol. 55, No. 3, pp. 269-317.

Wong Fillmore, L. with Valadez, C. (1986). "Teaching bilingual learners." in Wittrock, M. (Ed.). *Handbook of research on teaching.* New York, NY: MacMillan Publishing Co.

Wood, D. and Wood A. (1984). *The napping house.* San Diego, CA: Harcourt, Brace, Jovanovich.

Appendix A: Vocabulary Test

The Napping House
by
Audrey and Don Wood

Name: _____ Teacher: _____

Reading book: _____

Instructions: Put a circle around the word that means the same as the underlined word.

napping

walking home
sewing
sleeping
happy

cozy

rosy
comfortable
fun to do
nasty

snoring

sneezing loudly
a sleeping noise
eating lunch
fun to do

dreaming

thinking in your sleep
ice cream
playing with toys
watching TV

child

a small cat
hard to find
a boy or girl
cold outside

dozing

knocking down walls
painting
crying
sleeping lightly

bites

hurts with teeth
hides
goes shopping
little pieces

flea

small pencil
small insect
tall building
big family

claws

jaws
scratches with nails
plays with birds
good food

slumbering

sleeping quietly
walking heavily
carrying too much
playing nicely

wakeful

sad
careful
can't sleep
can't think

snoozing

dancing
looking at your watch
swimming
taking a nap

granny

a type of fruit
a long day
hard work
a grandmother

thumps

walks
eats
hits
jumps

everyone

a lot of cats
all the people
silly song
not enough money

bumps

knocks into
runs
falls into
yells

breaks

grabs
smashes into pieces
walks in the door
rooms

scares

wipes clean
tells a story
finishes
frightens

mouse

house
small furry animal
large animal with ears
clown

no one

lots of eggs
all the world
no people
just two

Appendix B: Raw Data

	Control			Concur			PreRev	
Pre test	Post test	Delayed	Pre test	Post test	Delay	Pre test	Post test	Delay
4	6	6	19	18	20	11	9	9
5	4	3	0	4	1	14	20	20
3	3	5	5	6	3	14	20	19
17	20	19	0	1	2	17	18	17
9	14	14	1	1	0	13	17	17
3	4	3	2	3	4	3	5	3
17	18	18	3	1	5	3	4	9
11	14	16	4	8	2	10	19	19
16	20	20	4	2	3	14	16	17
18	17	18	6	3	8	6	15	13
1	0	2	8	19	17	4	19	15
7	10	11	8	7	7	11	19	20
3	9	3	11	12	14	1	3	4
5	4	3	14	13	10	13	20	19
4	5	1	3	4	4	14	18	17
17	19	15	8	7	10	8	17	17
			8	8	3	6	9	7
			12	16	16	14	18	18
			9	8	15	7	9	4
			6	5	5	9	15	13
			7	8	13	6	16	16
						10	17	12
						10	19	20